

FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

PERMIT TO CONSTRUCT

**A/N 480859
Granted TBD**

Equipment Description:

INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, WAUKESHA, MODEL H24 GLD, SPARK IGNITION, FOUR CYCLE, 8-CYLINDER, 530 BHP, LEAN BURN, TURBOCHARGED, AFTERCOOLED, FUELED WITH DIGESTER GAS OR DIGESTER GAS/ NATURAL GAS/ AIR BLEND, ALL FUEL BLENDS WITH AN EQUIVALENT HEATING VALUE OF DIGESTER GAS, WITH AN EXHAUST HEAT RECOVERY SYSTEM, AND AN AIR-TO-FUEL RATIO CONTROLLER, WAUKESHA, MODEL CEC, DRIVING AN AERATION BLOWER.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE FIRED ON DIGESTER GAS OR DIGESTER GAS/ NATURAL GAS/ AIR BLEND WITH AN EQUIVALENT HEATING VALUE OF THE DIGESTER GAS.
[RULE 1110.2][RULE 1303]
4. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL PROVISIONS OF RULE 1110.2.
[RULE 1110.2]
5. A NON-RESETTABLE OPERATIONAL TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE IN CUMULATIVE HOURS THE ENGINE IS OPERATED.
[RULE 1110.2]
6. A FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE TO THE ENGINE TO INDICATE THE FUEL USAGE IN CUBIC FEET, FOR EACH TYPE OF FUEL USED, AND FUEL USAGE SHALL BE RECORDED.
[RULE 204][RULE 1110.2]
7. THE TWO DIGESTER GAS FIRED ENGINES MAY ONLY BE OPERATED AT THE SAME TIME IF THE AVAILABLE DIGESTER GAS IS GREATER THAN THE 100% OF THE TOTAL HEAT INPUT (HIGHER HEATING VALUE BASIS) FOR ONE ENGINE, UNLESS THE THIRD ENGINE USED TO DRIVE AN AERATION BLOWER IS TEMPORARILY OUT OF SERVICE FOR REPAIR, MAINTENANCE, OR TESTING.
[RULE 1110.2]

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8. THE DIGESTER GAS ENGINES SHALL BE OPERATED WITH AT LEAST 50% OF THE TOTAL HEAT INPUT SUPPLIED BY DIGESTER GAS (HIGHER HEATING VALUE BASIS) FOR THE FACILITY AVERAGE IN EACH CALENDAR MONTH EXCEPT WHEN THIS SEWAGE TREATMENT PLANT ACTIVATES AN EMERGENCY OPERATIONS CENTER OR INCIDENT COMMAND SYSTEM, AS PART OF AN EMERGENCY RESPONSE PLAN, BECAUSE OF EITHER HIGH INFLUENT FLOWS CAUSED BY PRECIPITATION OR A DISASTER.
[RULE 1110.2]
9. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
 - A. TOTAL HOURS OF OPERATION.
 - B. THE NUMBER OF HOURS THE ENGINE IS OPERATED ON SPECIFIC FUEL OR FUEL BLENDS USED AND THE FUEL USED.
 - C. THE BTU RATING OF THE DIGESTER GAS.
 - D. FUEL CONSUMPTION OF EACH FUEL TYPE.
 - E. THE PERCENT DIGESTER GAS OF THE TOTAL FUEL BY VOLUME.
 - F. THE NUMBER OF HOURS THE ENGINE IS OPERATED CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.[RULE 204][RULE 1110.2]
10. THE ENGINE SHALL OPERATE BETWEEN 1539 AND 1881 RPM, EXCEPT DURING START-UP OR SHUT-DOWN OPERATION WHICH DOES NOT EXCEED 30 MINUTES PER EVENT.
[RULE 1110.2]

Emissions and Requirements:

11. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
 - PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
 - NOX: 0.6 GM/BHP-HR, RULE 1303
 - NOX: 0.70 LBS/HR, RULE 1303
 - NOX: 36 PPMV, RULE 1110.2
 - VOC: 0.8 GM/BHP-HR, RULE 1303
 - VOC: 0.29 LBS/HR, RULE 1303
 - VOC: 250 PPMV, RULE 1110.2
 - CO: 2.5 GM/BHP-HR, RULE 1303
 - CO: 2.42 LBS/HR, RULE 1303
 - CO: 2000 PPMV, RULE 1110.2

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**A/N 480864
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